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LE, BRIAN Q

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/785,049	JAEGER, DENNY	
	Examiner	Art Unit	
	Brian Q. Le	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 June 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-14,16,18-27,29-41,48-50 and 95* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-2, 4-14, 16, 18-27, 29-41, 48-50, and 95* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Amendment and Arguments

1. Applicant's amendment filed June 06, 2005, has been entered and made of record.

2. Applicant's arguments with regard to claims 1-27, 29-50, 95 and 96 have been fully considered, but are not considered persuasive because of the following reasons:

Regarding the 35 U.S.C. 112 rejection of limitation "determine the existence and number and angles of vertices in a line which could be drawn between said points." The Applicant cited page 29, lines 36; page 38, lines 14-24; FIG. 10-11 and specifically cited "The software goes through and **looks for recognizable vertices** that exceed an angular threshold. The number of vertices that are detected is stored for later use." Clearly, one skilled in the art can see the distinction between the support of the specification and the claim's language. In the claim language, the Applicant claim determine the existence of vertices where as in the specification supports the searching of recognizable vertices. The existence of vertices is not the same whether the vertices are recognized. Thus, the specification does not support the determining of the existence of number and angles of vertices in a line, which could be drawn between said points.

Regarding the 35 U.S.C. 112 rejection of limitation "color rules to determine agglomeration of said entries as a single entity." of claim 9, the Applicant cited the supported and amended the claim's language to overcome the rejection. Thus, the rejection is withdrawn.

Regarding the 35 U.S.C. 112 rejection of limitation "excluding identification of shapes that do not conform to said set of rules regarding maximum proximate distance to said another graphic object." of claim 26, the Applicant cites page 5, lines 5-18 and page 31-32, lines 23-4 to show the support. The Examiner respectfully disagrees. The cited locations specifically support

"maximum permissible distance" which is different from "maximum proximate distance" as claimed. Second, the support for the step of "**excluding identification of shapes that do not conform**" base on set of rules regarding maximum proximate distance is not found as well.

Regarding the 35 U.S.C. 112 rejection of limitation "reiterating said slice step." of claim 38, the Applicant cited the supported and amended the claim's language to overcome the rejection. Thus, the rejection is withdrawn.

Regarding the 35 U.S.C. 103 rejection, the Applicant argues (bottom of page 28) that Capps Reference generate a bounding rectangle but it is not used in any way for stroke analysis. The Examiner respectfully disagrees. Capps clearly teaches the bounding rectangle box (stroke bounds/object bounds) is to further determining the overlap between objects or strokes (column 8, lines 45-65 and column 15, lines 18-43).

The Applicant also further argues (page 29) that Capps does not have any such showing of a Wide Pen test. Again, as indicated in previous Office Action, the Applicant did not specifically define the special definition of Wide Pen and thus resulted subjective interpretation. For the arrow logics argument, the rejection was made also based on the subjective interpretation. To further explain to the Applicant, the claim language (specifically in the independent claims) was written as "**performing at least one of the following steps in any order**" (emphasis added). Thus, the examiner does not NEED to find a reference or prior arts to teach every limitation as claimed.

Thus, the rejections of all of the claims are maintained.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-2, 4-14, 16, 18-27, 29-41, 48-50, and 95 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claims 1, 9, 10, 11, 15, and 29, the original disclosure of the specification does not disclose the limitation of "**determine the existence and number and angles** of vertices in a line which could be drawn between said points" (emphasis added). The Applicant is invited to show the Examiner the exact page, paragraph, line and FIG. number where is this limitation being disclosed in the original specification. As indicated in the "Response to the Applicant's Remarks", the specification has the support for searching for the recognizable vertices.

Referring to claim 26, new amended limitation "and thereafter **excluding identification of shapes that do not conform to said set of rules regarding maximum proximate distance** to said another graphic object" is not disclosed in the original specification. Please refer back to the "Response to the Applicant's Remarks" Section for further explanations.

Claims not specially addressed depend from indefinite antecedent claims.

5. The terms "substantially orthogonal", "substantially non-orthogonal", and "magic number values" in claims 34, 36-37, 48-50 are relative terms which render the claim indefinite. The term "substantially orthogonal", "substantially non-orthogonal", and "magic number values" are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Further elaborations upon these terms are required.

6. Claims 1-2, 4-8, 12-14, 16, 18-22, 24-26, 32-33, 38-41 and 48-50 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Regarding claim 1, the specification does not has supports for the newly added limitation "performing a Wide Pen Test including **the reiterative steps of constructing an invisible minimum ... exceeds a predetermined coincidence threshold;**". The Applicant MUST clearly cites the page number, line number and figure number of the "reiterative steps" in constructing the concept in the claim's language. Similarly to claim 18, specification also does not have the support for "reiterating said Wide Pen Test when said number of points does not exceed said predetermined threshold, said reiteration including generating a further trial object ... defining said further trial object." Also to claim 19, the Applicant must cite the support for the newly added limitation. In addition, regarding claims 32-33, the added + or – 20° is not supported in the specification.

Regarding claim 38, the specification does not has supports for the newly added limitation "a slice step of identifying a starting point, then identifying a first sequential point ...and second sequential points constituting a three-point slice;". The Applicant MUST clearly cites the page number, line number and figure number for the support of this claim's language.

Claims not specially addressed depend from indefinite antecedent claims.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 1 recites the limitation "the iterative steps" in line 9 and the limitation "the existence" in line 7 of claim 1. There is insufficient antecedent basis for this limitation in the claim.

9. Claim 9 recites the limitation "the existence" in line 7 of claim 9. There is insufficient antecedent basis for this limitation in the claim.

10. Claim 10 recites the limitation "the existence" in line 7 of claim 10. There is insufficient antecedent basis for this limitation in the claim.

11. Claim 11 recites the limitation "the existence" in line 7 of claim 11. There is insufficient antecedent basis for this limitation in the claim.

Claim Objections

12. Claims 38 and 47 are objected to because these claims are very difficult to understand due to the use of confusing language. Appropriate correction is required. The prior art rejection based on the Examiner's best understanding.

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

14. Claims 1-2, 4-7, 9-15, 24, 29-43, and 48-49 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamakawa U.S. Patent No. 6,144,764.

Regarding claim 1, Yamakawa teaches an electronic device that accepts hand drawn entries, a method for recognizing the hand drawn entries (abstract, first 3 lines), comprising the steps of:

Receiving each hand drawing entry as a plurality of sequential points (FIG. 1B);

Determining the existence and number and angles of vertices in a line which could be drawn between said points (column 7, lines 27-51) (FIG. 9).

For claim 2, Yamakawa further teaches the method for recognizing hand drawn wherein said at least one step includes determining the distance between said vertices (FIG. 9).

For claim 4, Yamakawa discloses the method for recognizing hand drawn entries wherein said at least one step includes performing a test for Golden Clues (an observed analysis of how people tend to drawn object at real time as defined by the specification on pages 41-42) (column 12, lines 3-25).

Regarding claim 5, Yamakawa also discloses the method for recognizing hand drawn entries wherein said at least one step includes the step of excluding identification of shapes that

do not conform to said set of rules (The identification process that only bases on the result of comparison) (abstract).

Also to claim 6, Yamakawa further discloses the method for recognizing hand drawn entries wherein said at least one step includes excluding identification of shapes that do not conform to said set of rules regarding size (the identification process that only bases on the result of comparison and therefore regardless of size) (abstract).

To claim 7, Yamakawa teaches the method for recognizing hand drawn entries further including a plurality of hand drawn entries, each of said hand drawn entries being analyzed individually (column 2, lines 58-67).

For claim 9-11, 15, and 29, please refer back to claim 1 for further explanation.

For claim 12, Yamakawa also teaches the method for recognizing hand drawn entries further including the step of carrying out further analytic tests to determine the specific object type (FIG. 16 and FIG. 22).

For claim 13, Yamakawa discloses the method for recognizing hand drawn entries wherein said at least one step includes determining the angular trend of said plurality of sequential points (FIG. 9 and FIG. 10).

Regarding claim 14, Yamakawa also discloses the method for recognizing hand drawn entries further including the step of excluding identification of shapes that do not conform to said set of rules regarding angular trend (The process of extracting shapes into angular properties and compare with shapes in the dictionary with similar angular rules) (column 8, lines 5-50).

Referring to claim 24, Yamakawa further teaches the method for recognizing hand drawn entries further including the step of determining the angular orientation of said hand drawn entry

with respect to a reference orientation (FIG. 11- FIG. 14) (FIG. 9 and column 7, lines 30-67 and column 8, lines 1-10).

For claim 30, Yamakawa teaches the method further including the step of determining the existence of a vertex in said portion of said hand drawn entry, and calculating the vertex angle (FIG. 9 and FIG. 10).

Referring to claim 31, Yamakawa also teaches the method for recognizing hand drawn entries wherein said portion of said hand drawn entry is identified by storing and analyzing time of entry data of said plurality of points (column 12, lines 5-25).

Regarding claim 32, Yamakawa also teaches the method for recognizing hand drawn entries wherein if a vertex angle in said portion of said hand drawn entry is substantially orthogonal (FIG. 5A – FIG. 5B), said golden clue test provides increased potential for identifying a rectilinear shape (column 7, lines 30-35).

For claim 33, Yamakawa teaches the method for recognizing hand drawn entries wherein if a vertex angle in said portion of said hand drawn entry is substantially non-orthogonal, said golden clue test provides increased potential for exclusion of all rectilinear shapes (FIG. 9).

For claim 34, Yamakawa discloses the method for recognizing hand drawn wherein if a pair of vertex angle in said portion of said hand drawn entry are substantially orthogonal, proximate, and opposite, said golden clue test provides increased potential for identification of a folder shape (FIG. 9).

Regarding claim 35, Yamakawa teaches the method for recognizing hand drawn entries wherein said golden clue test includes identifying a first-drawn portion of said hand drawn entry,

determining the existence of a vertex in said first drawn portion of said hand drawn entry, and calculating the vertex angle (FIG. 1(b) and FIG. 4).

Regarding claims 36-37, please refer back to claims 32-33 for further explanation.

For claim 38, Yamakawa discloses an electronic device that accepts hand drawn entires, a method for recognizing the hand drawn entries, comprising the steps of:

Receiving each hand drawn entry as a plurality of sequential points lying on the hand drawn line (FIG. 7 and FIG. 8);

A slice step of identifying a starting point, then identifying a first sequential point that is adjacent (FIG. 7-8) and spaced apart greater than a minimum pixel length distance, then identifying a second sequential point spaced from said first sequential point at least said minimum pixel length distance, said starting point and first and second sequential points constituting a three-point slice (column 6, lines 24-41); constructing an angle defined by said three points, measuring the constructed angle, and reiterating said slice step in serial fashion with consecutive points (the processing of assigning vector for each stroke which is iteration processing) of said hand drawn entry to include all said points of said hand drawn entry (column 7, lines 15-50).

Also to claim 39, Yamakawa also teaches the method further including the step of storing the angle measurement of a slice when it exceeds a predetermined angle threshold (column 8, lines 38-42).

Regarding claim 40, Yamakawa also teaches the method for recognizing hand drawn entries further including the step of reducing said predetermined angle threshold whenever said

reiterated slice step yields and angular measurement less than said predetermined angle threshold (FIG. 7, lines 28-67).

For claim 41, Yamakawa discloses the method wherein if an angle measurement of a given slice step exceeds said predetermined angle threshold, and the angle measurement of the subsequent slice step is less than said predetermined angle threshold, a vertex is identified in the portion of said hand drawn entry containing said given slice step (column 7, lines 25-67).

Also to claim 42, Yamakawa also teaches the method wherein the step includes detecting and storing the first pen down location of said hand drawn entry (FIG. 7 and FIG. 8).

For claim 43, Yamakawa further teaches the step of detecting and storing the direction of the pen stroke of said hand drawn entry (column 8, lines 35-42).

Regarding claim 48, Yamakawa further teaches the method for recognizing hand drawn entries wherein said results of said at least one step include numerical parameters that correspond to characteristics of said hand drawn entry, said numerical parameters being compared to a stored magic number values (column 9, lines 35 – lines 55).

For claim 49, please refer back to claim 5 for the explanation.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

16. Claims 8, 16, 18-23, 26, 50, and 95 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Yamakawa U.S. Patent No. 6,144,764 and Capps U.S. Patent No. 5,583,542 as applied to claim 1 above.

Regarding claim 8, as discussed previously, Yamakawa teaches the analysis of single entity. However, Yamakawa does not teach the lines being agglomerated (close proximity). Capps teaches the hand drawn recognition process wherein the object being agglomerated (close proximity) (FIG. 4, elements 114-116). Capps teaches an input stroke is a gather of series of straight line segments and this is used to detected the proximity (approximate) the single input/entity (the curved path of the inputted stroke). This is clearly further teaches by Capps at column 9, lines 60-67. Modifying Yamakawa's method of hand drawn recognition process according to Capps would able to further determine the overlap region of the hand drawn characters by using the agglomeration technique. This would improve processing and therefore, it would have been obvious to one of the ordinary skill in the art to modify Yamakawa according to Capps.

Regarding claim 16, Capps further teaches the method for recognizing hand drawn entries further including the step of determining the size of said bounding rectangle, and comparing said size to size rules for at least on identifiable shape (column 2, lines 35-50).

For claim 18-22, these dependent claims further extend the newly added limitation of claim 1, "performing a Wide Pen Test including ... exceeds a predetermined coincidence threshold". These claims are rejected without further consideration of prior arts because these claims depend on the limitation, which was not selected for the art rejection. This is because the independent claim 1 clearly stated, "performing at least one of the following steps in any order".

Therefore, the Examiner only selected on of the limitation and thus did not choose the "perform a Wide Pen Test" for the art rejection. Note, this situation will also apply for all other dependent claims that depend on the independent claims that have the limitation "performing at least one of the following steps in any order".

For claim 23, Capps discloses the method for programming an electronic device including the step of drawing at least one arrow from an attribute shown in an info window to at least one identified shape outside said info window (FIG. 3A – 3E).

Regarding claim 26, Capps further teaches the method for recognizing hand drawn entries further including the step of determining the proximity of said hand drawn entry to another graphic object (FIG. 4, elements 114-116). Also, please refer back to claims 6, 14, and 25 for the same explanation with regard to the excluding identification of shapes that do not conform to said set of rules regarding maximum proximate distance to said another graphic object.

Regarding claim 50, Yamakawa does not teach the concept wherein magic number values can be selectively varied by user input. Capps teaches the concept where numeric information can be entered into the pen-based computer system. Modifying Yamakawa's method of hand drawn recognition process according to Capps would be able to the user to enter numerical values through the user input mean. This would improve processing and therefore, it would have been obvious to one of the ordinary skill in the art to modify Yamakawa according to Capps.

Regarding claim 95, please refer back to claim 23 for the explanation.

17. Claims 44-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Yamakawa U.S. Patent No. 6,144,764 and Meeks U.S. Patent No. 5,347,589 as applied to claim 1 above.

Referring to claim 44, Yamakawa does not explicitly teaches the step of measuring the speed of drawing said hand drawn entry. However Meeks teaches this limitation (FIG. 1 element 14). Modifying Yamakawa's method of hand drawn recognition process according to Meeks would be able calculate the speed of hand drawn. This would improve processing and therefore, it would have been obvious to one of the ordinary skill in the art to modify Yamakawa according to Meeks.

Referring to claim 45, Meeks teaches the detecting point-to-point spacing said sequential points of said hand drawing entry (FIG. 3B).

For claim 46, Meeks teaches the method wherein said speed of drawing is determined by recording the time of entry of each of said sequential points, and calculating the speed of drawing from said time of entry data (FIG. 1, element 14 and column 4, lines 55-61).

Conclusion

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Q. Le whose telephone number is 571-272-7424. The examiner can normally be reached on 8:30 A.M - 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on 571-272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BL
April 15, 2006

JINGGE WU
PRIMARY EXAMINER